WHAT IS CLAIMED IS:

1. A method for separating magnetic particles suspended in a fluid comprising:

providing an apparatus in a first position having a container for containing a fluid having magnetic particles suspended in the fluid, an automated pipette, and a magnet;

placing the magnet and the container in a first position relative to one another so that the magnet exerts a magnetic field on the magnetic particles that tends to isolate the magnetic particles in a selected zone of the container distal from the pipette;

applying the magnetic field across the container for a selected period of time to evacuate the magnetic particles from a first aspiration zone of the container;

aspirating a preselected quantity of fluid from the first aspiration zone in the container, wherein the preselected quantity of fluid is less than ½ (one-half) the volume of the fluid;

placing the apparatus in a second position separating the magnetic field from the pipette, whereby in the second position the magnet applies a magnetic field to the magnetic particles to evacuate the magnetic particles from a second aspiration zone;

aspirating the fluid from the second aspiration zone whereby the magnetic particles are separated from the fluid.

2. An apparatus for isolating magnetic particles from a fluid, the apparatus comprising:

an array of magnets, said array having at least n columns and at least m rows, wherein n is at least 1, and m is at least 3; and

an array of at least n+1 containers positioned adjacent to the array of magnets such that each container or container-holder is adjacent to only one magnet.

3. The apparatus of claim 2, wherein n is at least 3 and m is at least 6.

4. The apparatus of claim 2, wherein the number of columns in the array of magnets is one-half the number of columns in the array of containers.

4. An apparatus comprising:

a first process path for isolating a nucleic acid; and

a second process path for amplification of nucleic acids, wherein the second process path is positioned vertically below the first process path.

5. The apparatus of claim 4, wherein the apparatus further comprises a horizontal surface upon which the first process path is mounted, wherein the horizontal surface includes an opening adapted for the transfer of reaction vessels containing isolated items of interest to the second process path.

6. The apparatus of claim 4, wherein the second process path is enclosed in a chamber containing a vent, and the apparatus includes a pressure source for the chamber causing air to flow from the chamber through the vent.

7. An apparatus for isolating an item of interest in a sample, comprising:

a vertically oriented magnet; and

a holder adapted to hold a container having a sample near the magnet.

8. The apparatus of claim 7, comprising:

an array of magnets, said array having at least n columns and at least m rows, wherein n is at least 1, and m is at least 3; and

an array of at least n+1 containers is positioned adjacent to the array of magnets such that each container is adjacent to only one magnet or one row of magnets, wherein a line drawn through the center of each magnet in the row of magnets does not intersect the circumference defining the open end of the container.

9. The apparatus of claim 8, wherein n is at least 3 and m is at least 6.

10. An automated pipettor utilizing a first disposable pipette tip and a second disposable pipette tip, comprising a removable tip isolation container adapted to store the first disposable pipette tips in isolation from the second disposable pipette tip.

11. An apparatus comprising:

a holder for a container array,

a magnet array for capturing magnetic particles, and

a bias magnet,

wherein the bias magnet spans the container array to provide an effective magnetic field originating at opposite ends of the container array

12. The apparatus of claim 11, wherein the bias magnet increases magnetic flux density at the uppermost portion of containers in the container array.

13. The apparatus of claim 12, wherein the bias magnet increases the magnetic flux density by 3-fold at one-half the height of the container.

14. A method for separating magnetic particles suspended in a fluid in an automated instrument,

wherein the instrument has at least one magnet, an automatic pipettor, and a container in which is placed a fluid suspension of magnetic microparticles, and

wherein the instrument is capable of mechanically juxtaposing the container with one or more magnets of the instrument,

in which method the instrument:

positions the container in a first position relative to a first magnet;

actuates the automatic pipettor so as to aspirate a preselected quantity of fluid from a first aspiration zone in the container;

repositions the container into a second position relative to a first magnet or to a second magnet;

aspirating the fluid from a second aspiration zone;

whereby the magnetic particles are separated from the fluid.

15. A method for separating magnetic particles suspended in a fluid in an automated instrument,

wherein the instrument has at least a first magnet, a pipettor, and a container in which is placed a fluid suspension of magnetic microparticles, and

wherein the instrument is capable of mechanically juxtaposing the container with one or more magnets of the instrument,

in which method the instrument performs the following steps:

bringing the container and first magnet near each other such that the center of the magnetic field is located nearer to the open end of the container than to the closed end of the container so as to capture a portion of the magnetic microparticles on the wall of the container;

the container or magnet is moved such that the container is brought near to a second magnet, which may be the same or different than the first magnet, and the center of the magnetic field of the second magnet is closer to the closed end of the container than to the open end of the container such that the collection of captured magnetic microparticles is moved lower on the wall of the container; and

aspirating a portion of the fluid from the container.

16. A method of isolating nucleic acid from a sample, comprising the following steps:

adding to the container: a sample comprising nucleic acids, a lysis solution, and magnetic microparticles such that nucleic acids are bound to the microparticles;

separating the microparticles from the fluid according to claim 15, wherein when the center of the magnetic field of the second magnet is moved closer to the closed end of the container than to the open end of the container, it is positioned laterally to the container near the bottom of the container, but not below the container;

adding a wash solution to the container;

aspirating a portion of the fluid from the container;

raising the container relative to the magnet such that the bottom of the container is raised above the top of the magnet,

adding an elution buffer; and

removing a portion of the elution buffer thereby isolating nucleic acid from the sample.